

CLAIMS

[1] An ultrasonic diagnosis apparatus, comprising:

first storage means for storing digital reception beam data converted from a reception beam formed from an ultrasonic received signal;

5 first control means for controlling reading and writing of data from/in the first storage means;

a filter coefficient calculation portion for calculating a filter coefficient based on information on the reception beam, the information including a positional relationship between the reception beam and a transmission beam;

10 and

a first spatial filter operation portion for subjecting each of a plurality of the reception beam data including data of beams received in parallel from a single transmission beam to filtering processing for reducing a difference in image quality between adjacent beams based on the filter coefficient,

15 wherein image data output from the first spatial filter operation portion are converted into scanning of a display monitor so as to display an image on the display monitor.

[2] The ultrasonic diagnosis apparatus according to claim 1, further comprising:

20 a two-dimensional Doppler signal processing portion for subjecting reception beam data from an ultrasonic reception data processing portion to two-dimensional Doppler processing;

second storage means for storing two-dimensional Doppler data output from the two-dimensional Doppler signal processing portion;

25 second control means for controlling reading and writing of data from/in the second storage means; and

a second spatial filter operation portion for subjecting each of a plurality of the received two-dimensional Doppler data including data of

beams received in parallel from a single transmission beam to filtering processing for reducing a difference in image quality between adjacent beams based on the filter coefficient supplied from the filter coefficient calculation portion.

- 5 [3] The ultrasonic diagnosis apparatus according to claim 1 or 2, wherein the filter coefficient calculation portion is able to control the filter coefficient in accordance with a receiving depth.

- [4] The ultrasonic diagnosis apparatus according to claim 1 or 2, wherein the filter coefficient calculation portion is able to control the filter coefficient
10 in accordance with an angle of the reception beam.

- [5] The ultrasonic diagnosis apparatus according to claim 1 or 2, wherein the filter coefficient calculation portion is able to control the filter coefficient in accordance with a focal position of the transmission beam.